

### ABSTRACT OF THE DISCLOSURE

A method for assessing toxicity and toxicology of a substance is disclosed comprising: exposing a set of at least two genes to the substance; monitoring the response of each gene in the set of genes to the substance; analyzing the variance of the response to the substance for each gene using contrast analysis; constructing a summary score for each gene in the set of genes; performing a logistic regression analysis upon the summary scores; and using the results of the logistic regression analysis to provide a predictive model regarding the toxicity and toxicology of the substance.